WE CLAIM:

1. A movable system having capacitance-based position sensing, comprising:

a pair of objects;

an actuator configured to effect an operative range of relative motion between the objects along an axis; and

a capacitance-based position sensor, including

a first plate secured to one of the objects; and

a pair of second plates secured to the other of the objects so that the second plates are adjacent and coplanar, and so that the second plates are spaced from, and parallel to, the first plate as the objects move relative to one another along the axis,

where the configuration of the first plate and second plates results in two spaced-plate capacitors having capacitances that vary as the objects move relative to one another within the operative range along the axis, where the capacitance-based position sensor uses the capacitances to generate output usable to determine relative position of the objects along the axis.

2. The movable system of claim 1, further comprising a capacitance measuring circuit configured to apply a time-varying input signal to one of the pair of second plates, and apply an inversion of the time-varying input signal to the other of the pair of second plates.

3. The movable system of claim 2, where the time-varying input signal includes a sinusoidal carrier.

4. The movable system of claim 1, where the capacitance-based position sensor is configured so that the output is substantially independent of perpendicular spacing variations occurring between the first plate and each of the second plates.

5. The movable system of claim 1, where the capacitors form part of a capacitance measuring circuit having an output-input transfer function that is substantially independent of perpendicular spacing variations occurring between the first plate and the second plates as a result of the pair of objects moving relative to one another.

6. The movable system of claim 1, where one of the pair of objects is a computer-readable storage medium movably mounted within an enclosure, the capacitance-based position sensor being configured to generate the output so that the output is usable to determine relative position of the storage medium to the enclosure.

7. The movable system of claim 6, further comprising a read/write device fixed to the enclosure, the read/write device being configured to read data from and write data to the storage medium.

8. A movable system having capacitance-based position sensing, comprising:

a pair of objects translationally movable relative to one another through an operative range of x-axis motion along an x-axis, and through an operative range of z-axis motion along a z-axis that is perpendicular to the x-axis; and

a capacitance-based position sensor, including:

a first plate fixed to one of the objects; and

a pair of second plates fixed to the other object, where the first plate and the second plates are perpendicular to the z-axis, and where the first plate forms with each of the second plates a variable capacitance that varies as the objects are moved over the operative ranges of x-axis motion and z-axis motion due to varying overlap and spacing between the first plate and each of the second plates, the variable capacitances forming part of a circuit having an output-input transfer function that is substantially independent of spacing variations occurring between the first plate and each of the second plates as a result of the objects moving relative to one another through the operative range of z-axis motion.

9. A sensor that outputs varying capacitance based upon changes in relative position along an axis between a pair of objects, comprising:

a first plate secured to one of the objects; and

a pair of second plates secured to the other of the objects so that the second plates are adjacent and coplanar, and so that the second plates are spaced from and parallel to the first plate as the objects move relative to one another along the axis,

where the configuration of the first plate and second plates results in two spaced-plate capacitors having capacitances that vary as the objects move relative to one another along the axis, where the sensor uses the capacitances to generate output usable to determine relative position of the objects along the axis.

10. The sensor of claim 9, further comprising a capacitance measuring circuit configured to apply a time-varying input signal to one of the pair of second plates, and apply an inversion of the time-varying input signal to the other of the pair of second plates.

11. The sensor of claim 10, where the time-varying input signal includes a sinusoidal carrier.

12. The sensor of claim 9, where the sensor is configured so that the output is substantially independent of perpendicular spacing variations occurring between the first plate and each of the second plates.

13. The sensor of claim 9, where the capacitors form part of a capacitance measuring circuit having an output-input transfer function that is substantially independent of perpendicular spacing variations occurring between the first plate and the second plates as a result of the pair of objects moving relative to one another.

14. A sensor that outputs varying capacitance based upon changes in relative position between a pair of objects, comprising:

a first plate assembly configured to be fixed to one of the objects, including first plates; and

second and third plate assemblies configured to be fixed to the other of the objects, the second plate assembly including second plates, the third plate assembly including third plates,

where the plate assemblies are configured so that total overlap between the first plates and the second plates, and between the first plates and the third plates, repeatedly increases and decreases as the objects translate relative to one another through an operative range of motion along an axis, such that the first plate assembly forms with each of the second and third plate assemblies a variable capacitor having capacitance that varies with relative position of the objects.

15. The sensor of claim 14, where the plate assemblies are configured to be secured to the objects so that, as the objects translate relative to one another through the operative range of motion along the axis, the first plates are parallel to and spaced perpendicularly from both the second plates and the third plates.

16. The sensor of claim 14, where the plate assemblies are configured to be secured to the objects so that, as the objects translate relative to one another through the operative range of motion along the axis,

the first plates are coplanar; and

the second and third plates are coplanar and spaced perpendicularly from the first plates.

17. The sensor of claim 14, where the second and third plates are interleaved, such that one of the second plates is positioned between each pair of neighboring third plates.

18. The sensor of claim 14, where the plate assemblies are configured so that, as the objects translate relative to one through the operative range of motion along the axis, the total overlap between the first plates and the second plates varies inversely with the total overlap between the first plates and the third plates.

19. The sensor of claim 14, where the plate assemblies are configured so that, as the objects translate relative to one through the operative range of motion along the axis, the capacitance produced between the first plates and the second plates varies inversely with the capacitance produced between the first plates and the third plates.

20. The sensor of claim 14, where the variable capacitors form part of a capacitance-measuring circuit configured to produce, in response to application of an input to at least one of the plate assemblies, an output based upon capacitance between the first plates and the second plates, and between the first plates and the third plates.

21. The sensor of claim 20, where the capacitance-measuring circuit is configured so that the output is substantially independent of perpendicular spacing variations occurring between the first plates and the second plates, and between the first plates and the third plates.

22. The sensor of claim 20, where the capacitance-measuring circuit is configured to apply a time-varying input signal to the second plate assembly, and to apply an inversion of the time-varying input signal to the third plate assembly, in order to produce the output.

23. The sensor of claim 22, where the time-varying input signal is sinusoidal, and where the inversion of the time-varying signal is produced through a phase shift of the sinusoidal time-varying input signal.

24. The sensor of claim 14, where the first plate assembly is configured to be operatively secured to one of a computer-readable storage medium and an enclosure within which the storage medium is mounted, and where the second and third plate assemblies are configured to be operatively secured to the other of the storage medium and enclosure, the sensor thus being configured to output varying capacitance based upon changes in relative position between the storage medium and enclosure.

25. A movable system having capacitance-based position sensing, comprising:

a pair of objects;

a first plate assembly secured to one of the objects, including first plates; and

second and third plate assemblies secured to the other of the objects, the second plate assembly including second plates, the third plate assembly including third plates,

where the plate assemblies are configured so that total overlap between the first plates and the second plates, and between the first plates and the third plates, repeatedly increases and decreases as the objects translate relative to one another through an operative range of motion along an axis, such that the first plate assembly forms with each of the second and third plate assemblies a variable capacitor with a capacitance that varies with relative position of the objects.